

Docket No.: 0446-0165PUS1  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Jarrod David BARKER et al.

Application No.: Not Yet Assigned

Confirmation No.: N/A

Filed: July 13, 2004

Art Unit: N/A

For: A FUEL CELL GAS SEPARATOR

Examiner: Not Yet Assigned

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

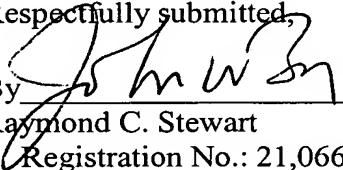
Sir:

The PTO is requested to use the amended sheets/claims attached hereto (which correspond to Article 19 amendments or to claims attached to the International Preliminary Examination Report (Article 34) during prosecution of the above-identified national phase PCT application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: July 13, 2004

Respectfully submitted,

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Attachment(s)

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9. A gas separator according to any one of claims 1 to 8 wherein the material of the third intermediate layer is the same as the electrically conductive plug material.
10. A gas separator according to any one of claims 1 to 9 wherein the perforations  
5 extend perpendicularly through the thickness of the first and second layers.
11. A gas separator according to any one of claims 1 to 10 wherein perforations in the first layer is offset relative to perforations in the second layer.
- 10 12. A gas separator according to any one of claims 1 to 11 wherein each perforation has an average cross-sectional dimension in the range of 50 to 1000 $\mu$ m.
13. A gas separator according to any one of claims 1 to 12 wherein the total area of the perforations through each of the first and second layers is in the range of 0.1 to 20 mm<sup>2</sup> per  
15 1000 mm<sup>2</sup> surface area of an electrode-contacting zone of said layer.
14. A gas separator according to any one of claims 1 to 13 wherein the electrically conductive plug material is selected from cobaltite, Ag, Au, Pt, Ni, alloys containing one or more of said metals, and other silver-based materials.
- 20 15. A gas separator according to claim 14 wherein the electrically conductive plug material is selected from metallic silver, a metallic mixture in which Ag is the major component, a silver alloy and a silver-glass composite.
- 25 16. A gas separator according to claim 15 wherein the electrically conductive plug material is silver alloyed or mixed with any one or more of gold, palladium, platinum and stainless steel.
- 30 17. A gas separator according to claim 15 wherein the electrically conductive plug material is a silver-glass composite containing from about 10 to about 40 wt% glass.

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